the calculus of variations and the oscillation of solutions of m linear differential equations of the second order with m parameters."

J. V. McKelvey: "The groups of birational transformations of algebraic curves of genus five."

J. L. Coolidge: "The representation by means of circles of the imaginary elements of a three-dimensional domain."

L. C. Karpinski: "Jordanus Nemorarius and John of Halifax."

H. H. Mitchell: "The subgroups of the collineation group of the finite plane, $PG(2p)$."

W. H. Jackson: "Differential and integral equations arising out of the theory of radiation."

G. D. Birkhoff: "The stable solutions of the problem of three bodies."

W. D. Cairns: "The solution of the Lagrange equation in the calculus of variations by means of integral equations."

Arthur Ranum: "On the line geometry of riemannian space."

H. F. MacNeish: "Linear polars of quantics which are completely reducible to the product of linear forms."

E. V. Huntington: "An elementary explanation of the precession of a gyroscope."

C. J. Keyser: "Relational groups."

Edward Kasner: "Thomson and Tait's theorem on conservative forces."

Edward Kasner: "Note on Lamé's families connected with dynamics."

Arthur Ranum: "On Clifford parallels and Clifford surfaces in riemannian space."

The Chicago Section of the society held its twenty-sixth regular meeting at the University of Chicago on Friday and Saturday, December 31–January 1, the program including twenty-five papers. The next meeting of the society falls on Saturday, February 26. The San Francisco Section will meet on the same day at Stanford University.

F. N. COLE,
Secretary

SOCIETIES AND ACADEMIES

THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE

THE thirty-sixth meeting was held at the Rockefeller Institute for Medical Research on December 15, 1909, with President Lee in the chair.

Members present: Atkinson, Auer, Banzhaf, Beebe, Brodie, Cole, Famulener, Gay, Gies, Harris, Jackson, Joseph, Kast, Lamar, Lee, Levene, Levin, Lewis, Lusk, Mandel, Maury, Meltzer, Morgan, Murlin, Morse, Opie, Pearce, Rous, Shaffer, Shaklee, Van Slyke, Wallace, Wolf.

Members elected: Stanley R. Benedict, Alfred F. Hess, A. W. Hewlett, J. F. McClendon, Raymond Pearl, A. I. Ringer, A. O. Shaklee, Sutherland Simpson and Hugh A. Stewart.

Scientific Program

"The Conglutination Reaction as a Method of Serum Diagnosis in Acute Infections," F. P. Gay and W. P. Lucas.

"Analysis of the Cleavage Products of the Nucleoprotein of the Mammary Glands," John A. Mandel.

"Respiration by Continuous Intra-tracheal Insufflation of Air" (a demonstration), S. J. Meltzer and J. Auer.

"Demonstration of Animals whose Thoracic Organs have been Operated upon," A. Carrel.

"The Mutual Life-saving Antagonistic Action of Barium and Magnesium" (a demonstration), D. R. Joseph and S. J. Meltzer.

"Acute Anaphylactic Death in Guinea-pigs: Its Cause and Possible Prevention" (a demonstration), J. Auer and P. A. Lewis.

"Anaphylactic Shock in the Dog," R. M. Pearce.

"The Cause of Serum Anaphylactic Shock and some Methods of Alleviating it," J. F. Anderson and W. H. Schultz.

"A Model Illustrating the Mode of Action of the Glomerulus," J. G. Brodie.

"The Influence of Glycerin on Gastric Secretion," L. Kast.

"The Summation of Stimuli," Frederic S. Lee and Max Morse.

"The Action of Magnesium Salts: (*a*) In Relation to Motor Nerve Impulses, (*b*) In Relation to Sensory Stimulation," A. H. Ryan and F. V. and C. C. Guthrie.

"The Effects of Direct Application of Magnesium Salts: (*a*) To Motor and Sensory Nerves, (*b*) To Cardio-inhibitory Nerves," C. C. and F. V. Guthrie and A. H. Ryan.

"The Survival and Growth of Subcutaneously Engrafted Ovarian and Testicular Tissue," C. C. Guthrie.

"The Survival of Engrafted Thyroid and Renal Tissue," C. C. Guthrie.

"The Effect of Anemia and of Double Hyperemia on Hyperplastic Goiter," C. C. Guthrie.

"A Method for the Determination of Amino-nitrogen and its Applications," Donald D. Van Slyke.

"Note on the Production of Glycosuria by Pan-

creatic, Parathyroid and Infundibular Extracts," Isaac Ott and John C. Scott.

"The Immunity of the Eggs of *Ciona intestinalis* to its 'own' Spermatozoa," T. H. Morgan.

"A Report on Experimental Poliomyelitis," Simon Flexner and Paul A. Lewis.

"The Influence of Thyroid-parathyroid-ectomy on the Ammonia Destroying Power of the Liver," A. J. Carlson and Clara Jacobson.

"The Relation of Ptyalin Concentration to the Diet and to the Rate of Salivary Secretion," A. J. Carlson and A. L. Crittenden.

"On Non-specific Complement Fixation," Hideyo Noguchi.

"Experimental Cirrhosis of the Liver," Eugene L. Opie.

"Shaking Experiments with Protozoa," Max Morse.

Eugene L. Opie,
Secretary

THE ACADEMY OF SCIENCE OF ST. LOUIS

The academy met at the Academy Building, 3817 Olive St., Monday, December 20, 1909, at 8 P.M., President Trelease in the chair.

Dr. Victor E. Emmel, of the anatomical department of Washington University, presented a paper entitled, "Observations on the Differentiation of Regenerating Epidermal and Striated Muscle Tissue," illustrated with a number of slides under the microscope.

Professor Nipher presented some of the results of his recent work on electric discharge. He has devised a series of experiments on the separately grounded terminals of an electric machine, which prove conclusively that the negative terminal is in a condition of compression, and that the positive is in a condition of electric rarefaction. The negative glow is a discharge of negative electricity from the negative wire to the air and surrounding objects. The positive glow is a flow of negative particles from surrounding bodies and from the air, to the positive side of the machine.

The evidence was obtained by passing the positive and negative wires to separate grounds, through high resistances, consisting of wetted strings. Between these resistances and the machine terminals, these wires pass in a horizontal direction over photographic plates. Other independent ground wires terminate just below the center of the plates, and under the wires.

In a spark discharge from the positive terminal negative electrons pass upward from the ground wire and fog the central part of the film from the under side. Negative discharges, flowing over the top of the film to the positive wire, curve around the fogged area. They are repelled by it. On the other plate negative electrons pass downward from the lower side of the plate to the ground wire. The central area of the plate does not repel the outflowing discharge from the negative wire to the film. On the contrary, it attracts them. The discharge lines over the film are nearly parallel, but diverge slightly at their outermost ends.

Mary J. Klem,
Librarian

THE AMERICAN CHEMICAL SOCIETY
NEW YORK SECTION

The fourth regular meeting of the session of 1909–10 was held at the Chemists' Club on January 7.

The following papers were read:

"The Origin of the Chemical Elements," by Henry B. Russell.

"Chemical Examination of Watermelon Seed" and "Chemical Examination of Pumpkin Seed," by F. B. Power and A. H. Salway.

"Further Researches in the Quinazoline Field," by C. G. Amend and M. T. Bogert.

C. M. Joyce,
Secretary

RHODE ISLAND SECTION

The regular meeting of the section was held at the University Club on Thursday evening, December 2, at seven o'clock, preceded by the usual informal dinner.

Dr. H. J. Wheeler, director of the Rhode Island Agricultural Experiment Station at Kingston, R. I., read the paper for the evening and a large audience listened to the interesting report which he presented. His subject was "The Influence of Sodium and Potassium Salts upon the Subsequent Yield of Potato Tubers planted under Like Manurial Conditions."

The results obtained showed that when potatoes that had been grown with a predominance of sodium salts in the soil and those that had been grown with a predominance of potassium salts were planted side by side under identical conditions and manured equally, the best yield was obtained from the tubers that had been grown in the soil containing the extra sodium.

Albert W. Claflin,
Secretary

Providence, R. I.